

Appln No. 10/724,162
Amdt date 01/11/2008
Reply to Office action of 10/11/2007

REMARKS/ARGUMENTS

Claim 6 and 7 are cancelled.

In the Office action mailed October 11, 2007, Claims 1-14 were rejected under the first paragraph of 35 U.S.C. 112. Claims 1, 2, 8, 9, and 10-14 were rejected (as best understood) under 35 U.S.C. 103(a) as being unpatentable over Tiedemann (US 6,335,922) in view of Admitted Prior Art (Background of the invention, pages 1-4).

Regarding claims 1, 10, and 14, the Office action rejected these claims under the first paragraph of 35 U.S.C. 112. The Office action indicated that a CDMA system is known for transmitting one spread spectrum signal with one value of power to all the subscribers. Power regulation of a forward channel in CDMA is known, but the regulations are directed to one power level at a time, which are common for all active subscribers.

As an initial matter, Applicant does not believe that power levels are common for all active subscribers in CDMA communications systems. For example, the Applicant directs the examiner to Page 3, Line 6-16 of the specification:

In common with other cellular systems, in a system operating under the CDMA 2000 standard, the signal power transmitted to any subscriber unit (SU) is a function of the radio transmission channel quality (which depends, inter alia, on the distance between the subscriber unit and the base station), whereby the power is adjusted to maintain a given ratio between the received signal and the combination of noise and interference. This ratio is, however, also a function of the channel bandwidth and thus of the rate level of the channel; the higher the rate (i.e. the wider the band), the lower the processing gain of the CDMA and thus the higher the

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required transmission power. It is also to be noted that the total power of all signals transmitted at any instant is subject to a maximum value, characteristic of the transmitter.

Thus, although the applicability of the alleged deficiency to the claims is not clear, as noted in the specification systems operating under the CDMA 2000 standard adjust the power to any subscriber unit in order to maintain the ratio between the received signal and the combination of noise and interference. In view of the CDMA 2000 standard it is also respectfully submitted that structure and operation of the elements to deliver individual power levels to each subscriber unit is also known to those of skill in the art.

The Office action rejected claims 10-14 under 35 U.S.C. 112, first paragraph, as claims 10 and 14 are single means claims. Claims 10 and 14 have been amended to specify that the power estimator includes a processor. Support for this amendment may be found, for example on Page 18, Line 21-23. The applicant also amended claims 10 and 14 by removing the word "operative" and replacing it with the word "configured". It is respectfully submitted that claims 10 and 14 recite sufficient structure so as to not comprise a single means claim. The Office action also rejected claims 2-9 and 11-13 as being dependent on the rejected claims. Applicant now believes that these dependent claims are patentable.

The Office action rejected claims 1-14 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Office action rejected claim 1 because it recites the limitation "the data transmission" in line 4. The Office action rejected claims 10 and 14 as having the same problem. In response the applicant has amended claims 1, 10, and 14 by replacing "the data transmission" with "data transmission".

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The Office action also rejected claim 1 because it recites the limitation “the amount” in line 17 due to insufficient antecedent basis for this limitation. The Office action also notes that claims 10 and 14 have the same problem. In response the applicant has amended claims 1, 10, and 14 by replacing “the amount” with “an amount” in claims 1, 10, and 14.

The Office action also rejected claims 1, 10, and 14 due to a limitation directed to “the power level is associated with said transmission rate and is a product of a specific power and a multiplier, the specific power being the power level of transmission to the subscriber unit at a given fundamental data rate and said multiplier having a fixed direct relation to the associated transmission rate” as being unclear. In response, the applicant has stricken this limitation from claims 1, 10, and 14.

The Office action rejected claims dependent claims 2-9 and 11-13 as being dependent on the rejected claims. Applicant believes that these dependent claims are now patentable.

Regarding claims 1, 2, 8, 9, and 10-14, the Office action rejected these claims under 35 U.S.C. 103(a) as being unpatentable over Tiedemann (US 6,335,922) in view of Admitted Prior Art (Background of the invention, pages 1-4). Claim 1 has been amended by adding the text “computing an average rate multiplier for each active subscriber,” and by adding “where the total power transmitted by the BTS during each of a plurality of said observation windows is equal to the sum of products of the average rate multiplier by the estimated specific power for each of the subscribers.” Claim 10 has been amended by adding “to compute an average rate multiplier for each active subscriber,” and by adding “where the total power transmitted by the BTS during each of a plurality of said observation windows is equal to the sum of products of the average rate multiplier by the estimated specific power for each of the subscribers.” Claim 14 has been amended by adding “to compute an average rate multiplier for each active subscriber,” and by adding “where the total power transmitted by the BTS during each of a plurality of said observation windows is equal to the sum of products of the average rate multiplier by the

estimated specific power for each of the subscribers.” The Office action points to Tiedemann at col. 8, line 77 – col. 9, line 5 for disclosing “the power level is associated with said transmission rate and is a product of a specific power and a multiplier, the specific power being the power level of transmission to the subscriber unit at a given fundamental data rate and said multiplier having a fixed direct relation to the associated transmission rate.” Claim 1 now recites “computing an average rate multiplier for each active subscriber; and calculating using said measured amounts an estimated specific power for each of the subscribers where the total power transmitted by the BTS during each of a plurality of said observation windows is equal to the sum of products of the average rate multiplier by the estimated specific power for each of the subscribers.” Tiedemann merely states at col. 8, lines 53-60:

Having collected the information from each cell, channel scheduler 12 allocates resource to the scheduled users based on the collected information and the set of aforementioned goals at step 202. The allocated resource can be in the form of an assigned transmission rate or an allocated transmit power. The allocated transmit power can then be equated to an assigned transmission rate based on the required energy-per-bit of the scheduled user.

Thus, Tiedemann does not discuss or suggest computing an average rate multiplier for each active subscriber; and calculating an estimated specific power for each of the subscribers where the total power transmitted by the BTS during each of a plurality of said observation windows is equal to the sum of products of the average rate multiplier by the estimated specific power for each of the subscribers as specified in claim 1.

Claim 1 and dependent claims 2-9 are therefore allowable in view of Tiedemann.

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Claim 10 was rejected in view of Tiedemann on the same basis as claim 1. Claim 10 as amended specifies "to compute an average rate multiplier for each active subscriber; and to calculate, using any results of said measuring, an estimated specific power for each of the subscriber units where the total power transmitted by the BTS during each of a plurality of said observation windows is equal to the sum of products of the average rate multiplier by the estimated specific power for each of the subscribers." Accordingly, in view of the above discussion of Tiedemann, claim 10 and dependent claims 11-13 are allowable.

Claim 14 was rejected in view of Tiedemann on the same basis as claim 1. Claim 14 as amended specifies "to compute an average rate multiplier for each active subscriber; and to calculate, using the results of said measuring, an estimated specific power for each of the subscribers where the total power transmitted by the BTS during each of a plurality of said observation windows is equal to the sum of products of the average rate multiplier by the estimated specific power for each of the subscribers." Accordingly, in view of the above discussion of Tiedemann, claim 14 is allowable.

Allowance of the Application is earnestly requested.

The Commissioner is hereby authorized to charge any fees which may be required by this paper to Deposit Account No. 50-4270. Please show our docket number with any Deposit Account transaction.

Respectfully submitted,
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By


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